

REMARKS/ARGUMENTS

The final office action of May 12, 2005 has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested. Claims 1-28 remain in this application. Claim 14 has been canceled without prejudice or disclaimer.

Claims 1, 6-8, 12, 16, 19 and 23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. patent no. 5,091,964 to Shimomura. Applicants respectfully traverse this rejection.

Amended claim 1 recites, among other features, rescaling the drawings in accordance with the axes and proportional to the modification in line size. Shimomura lacks a teaching or suggestion of rescaling the drawings *proportional* to the modification in line size.

The primary object of Shimomura involves "detecting more precisely the existence of a blank portion or an unfilled pixel region as a boundary between adjacent text images." Col. 1, lines 42-45. This in effect allows the text portion of a document to be extracted by identifying the blank portions. Shimomura describes the process of extracting a text region at col. 4, line 10 to col. 6, line 61 with reference to Fig. 2. As described at col. 5, line 66 to col. 6, line 52,

With respect to each block . . . the sizes of the blocks are reduced at step S3, so that a circumscribed rectangular frame containing characters in the block is reduced. FIG. 5B shows an example of the processing of reducing a size of a block to reduce the circumscribed rectangular frame. In a block S31, there exists a blank space between the dividing lines LV3, LV4 and LH2 surrounding characters w and the characters w inside the circumscribed rectangular frame formed by these dividing lines. At step S3, a new circumscribed rectangular frame is formed by moving or setting back these dividing lines as shown by arrows until they reach or contact pixels which outline the characters w contained in the block, so that a newly circumscribed rectangular frame is formed as shown by solid lines in FIG. 5B. When the block contains no image or no filled pixel, the block is deleted. The same processing of forming a new circumscribed rectangular frame is applied to each of the blocks to redefine a block by reducing its size. In this embodiment of the present invention shown in FIG. 5A, there is no block deleted, so that there is no change in the number of blocks before and after redefining blocks. A layout of blocks obtained by redefining the blocks shown in FIG. 5A is shown in FIG. 6.

(Emphasis added). As is apparent from the above passage and Figs. 5A, 5B and 6, the actual characters in a text region block or the pixel filled periphery and central portion of a drawing bounded by the periphery in a drawing region block are not being reduced. Instead, blank space in the block is being deleted, to reduce the size of the block with the characters in a text region block or pixel filled periphery and the central portion of a drawing bounded by the periphery in a drawing region block maintaining their size. Thereafter, the system processes adjacent extracted sub-regions in step S4 and finally in step S5, the system process extracted text regions. Step S3 provides the framework for reducing the size of the block to a minimum size by eliminating blank space such that the text region can be extracted for further processing in step S5. Hence, reducing or scaling down each of the plurality of image regions is more accurately referred to as eliminating excess blank space to extract a text region. At most, Shimomura in removing blank space scales (reduces in size) only a portion of the contents of the text region block or drawing region block. Necessarily, Shimomura lacks a teaching or suggestion of rescaling drawings *proportional* to the modification in line size as recited in amended claim 1.

For at least the above reason, amended claim 1 is patentably distinct from Shimomura. Claims 6-8 and 12, which depend from claim 1, are considered allowable over Shimomura for the same reason, and further in view of the additional advantageous features recited therein.

Amended independent claim 23 is similar to claim 1 in the distinguishing respect noted above, and for at least this reason is patentable over Shimomura.

Amended independent claim 16, among other features, recites that in response to a change in a line size of the document, rescaling each of the drawings proportional to the change in the line size, and in accordance with the distance to the one of the reference axes. To the extent that the reasoning discussed with respect to claim 1 applies to claim 16, Shimomura lacks a teaching or suggestion of claim 16 and claim 19, which depends from claim 16.

Claims 2-5, 9-11, 17, 18 and 24-27 depending from one of claims 1, 16 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the following combinations:

- claims 2, 3, 9-11, 24 and 26 over Shimomura as applied to claims 1, 6-8, 12, 16-19 and 23 above, and further in view of U.S. patent no. 5,867,593 to Fukuda et al. ("Fukuda").
- claims 4 and 5 over Shimomura as applied to claims 1, 6-8, 12, 16, 19 and 23 above, Fukuda as applied to claims 2-3, 9-11, 24 and 26 above, and further in view of U.S. patent no. 6,326,970 to Mott et al. ("Mott").
- claims 17, 18 and 25 over Shimomura as applied to claims 1, 6-8, 12, 16, 19 and 23 above, and further in view of Mott.
- claim 27 over Shimomura as applied to claims 1, 6-8, 12, 16, 19 and 23 above, and further in view of U.S. patent no. 6,075,532 to Colleran et al. ("Colleran").

Applicants respectfully traverse all these rejections.

Even assuming, but not admitting, that Shimomura may be combined with the other applied references, none of the references, namely Fukuda, Mott, and Colleran, overcomes the aforementioned deficiencies noted above with respect to Shimomura. As such, claims 2-5, 9-11, 17, 18 and 24-27 are patentably distinct from the applied art for the same reasons as their ultimate base claim and further in view of the advantageous features recited therein.

For example, applicants submit that one skilled in the art would not have modified Shimomura with Fukuda to obtain the invention of claims 2, 3, 9-11, 24 and 26. The action asserts that since Fukuda discloses reducing image processing means for dividing images into small regions and reducing each of the small regions similar to the system described in Shimomura, one skilled in the art would have combined the references to include the determining and repositioning steps because "[b]y repositioning or re-dividing the regions so [the] overlapping problem would not exist [sic], and that would enhance the image region dividing system."

Shimomura and Fukuda are not properly combinable; there must be some motivation or incentive to combine the references. Tellingly, there is no evidence that the system of

Shimomura encounters an overlapping problem. Indeed, the focus of Shimomura involves automatically extracting text regions from a document image containing mixed forms of texts, drawings and pictures. In fact, the primary object of Shimomura, (“detecting more precisely the existence of a blank portion or an unfilled pixel region as a boundary between adjacent text images” col. 1, lines 42-45) does not even involve rescaling drawings. With the system of Shimomura, any reduction in size of the drawing region block is nothing more than tangential to the true purpose of Shimomura of extracting text blocks. As the action has failed to show that overlapping can even occur, or is much less a concern, with the system of Shimomura, there clearly is no incentive or motivation to modify Shimomura with Fukuda to obtain the invention of claims 2, 3, 9-11, 24 and 26. Similarly, claims 4 and 5, which depend from claim 3, are patentably distinct over the combination of Shimomura, Fukuda and Mott.

Moreover, applicants submit that one skilled in the art would not have modified Shimomura with Mott to obtain the invention of claims 17, 18 and 25. As discussed above, the focus of Shimomura involves automatically extracting text regions from a document image containing mixed form of texts, drawings and pictures. The motivation alleged by the action for combining Mott with Shimomura seems to be that the original look and feel of the page can be maintained while allowing the page to fit within a horizontal width without using horizontal scroll bars. As Shimomura does not teach or suggest a situation where a drawing, responsive to a change in line height, would ever extend beyond the horizontal display margin, there is no reason why one would have modified Shimomura with Mott as alleged in the action to reposition one or more of the drawings, such that a portion of the drawing is displayed on a first page of the document, and a portion of the drawing is displayed on a second page of the document.

Regarding claim 27, applicants submit that one skilled in the art would not have modified Shimomura with Colleran to realize the claim 27 invention for some of the same reasons set forth with respect to modifying Shimomura with Fukuda. For example, the action has failed to show that overlapping can even occur, or is much less a concern, with the system of Shimomura such that a modification would have even been desirable.

Also, independent claim 20 and its dependent claims 21 and 22 stand rejected over the combination of Shimomura and Colleran.

Claim 20 is directed to a method for editing an electronic document containing drawings and calls for the steps of determining a bounding box for a new drawing to be added to the document; identifying an anchor point for the new drawing; dividing the document into a plurality of adjacent regions, each region having a reference axis; and storing an offset value representing a distance between the new drawing and one of the reference axes. The action continues to allege that Shimomura shows the step of dividing, but acknowledges that Shimomura fails to provide a teaching or suggestion of determining a bounding box, identifying an anchor point, and storing an offset value. In an attempt to remedy these defects, the action relies on Fig. 4, and col. 8, line 46 to col. 9, line 52 of Colleran. The action alleges that it would have been obvious to combine Shimomura with Colleran, because “Colleran’s system improves the efficiency of redrawing animated characters on a desktop.”

In the last response, applicants asserted that one skilled in the art would not have modified Shimomura with Colleran. In response, the action, merely reiterated the same rationale for combining the references without specifically addressing the points raised by applicants.

The focus of Shimomura involves automatically extracting text regions from a document image containing mixed form of texts, drawings and pictures. In addition, the primary object of Shimomura, (“detecting more precisely the existence of a blank portion or an unfilled pixel region as a boundary between adjacent text images” col. 1, lines 42-45) does not even suggest adding a new drawing. Notably, Shimomura is directed to extracting a text region of a document and performs the step of dividing documents into a plurality of adjacent regions during this process. As such, the skilled artisan with Shimomura in hand could care less whether the system of Colleran improves the efficiency of redrawing animated characters on a desktop as that is wholly unrelated to the purpose of Shimomura. The combination of Shimomura and Colleran is nothing more than an exercise in impermissible hindsight. As such, one skilled in the art would not have been motivated to combine Shimomura and Colleran to obtain the claim 20 invention.

For at least this reason, claim 20 and its dependent claims 21 and 22 are considered patentable over the applied art.

Claims 13, 15 and 28 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. patent no. 6,397,233 to Okawa et al. ("Okawa"). Applicants have amended claim 13 to include the features of now canceled dependent claim 14, and as such this rejection is now moot. As the action rejected claim 14 over the combination of Okawa, and Fukuda, applicants will address this rejection with respect to amended claim 13.

As amended claim 13 calls for, among other features, determining whether the rescaled drawings overlap one another, and if the rescaled drawings are determined to overlap one another, repositioning one or more of the drawings to avoid the overlap. The action acknowledges that Okawa fails to teach or suggest the determining and repositioning steps. To overcome this deficiency, the action relies on Fukuda.

In the last response, applicants asserted that even assuming, but not admitting, that Fukuda discloses the determining and repositioning steps and Okawa discloses the remaining claimed features, one skilled in the art would not have modified Okawa with Fukuda in the manner suggested in the action. In particular, applicants noted that Okawa nowhere suggests that images or drawings would ever overlap according to the process of adding a document element to a created document, and perhaps even more importantly, based on the process described in Okawa, there is never a situation in which a document element or drawing would overlap according to any of the implementations described. The final office action responds to applicants' argument that since Fukuda discloses reducing image processing means for dividing images into small regions and reducing each of the small regions similar to the system described in Okawa for changing a document region by adjusting a data size of a document element, one skilled in the art would have combined the references to include the determining and repositioning steps because "[b]y repositioning or re-dividing the regions so [the] overlapping problem would not exist [sic], and that would enhance the image region dividing system." *Final office action*, p. 16.

Applicants continue to submit that, contrary to the action's assertion, one skilled in the art would not have been motivated to modify Okawa with Fukuda. The action mischaracterizes changing a document region by adjusting a data size of a document element described in Okawa as similar to dividing images into small regions and reducing each of the small regions described in Fukuda. Okawa is directed to adding document elements such as characters, symbols, space, words and the like, to a document by expanding a region of the document for addition of the document element(s) to the document. In contrast, Fukuda relates to an image region dividing apparatus for dividing and classifying image regions of an input image including typed characters, handwritten characters, a picture, graphics image and the like in units of image type. Okawa is wholly unrelated to dividing and classifying image regions in units of image type, and appears to allow documents elements of one or more types to be added in the document region. Thus, one skilled in the art would not have considered Fukuda to be similar to Okawa. Nonetheless, even if Okawa and Fukuda are similar, that does not mean that they are properly combinable; there must be some motivation or incentive to combine the references. Tellingly, there is no evidence that the system of Okawa ever encounters an overlapping problem. Indeed, in Okawa, a user manipulates a pointing device to create a document region where the document elements are to be inserted and would have no need to determine whether rescaled drawings overlap, and if so, repositioning the drawings to avoid overlap as claimed. As the action has failed to show that overlapping can even occur, or is much less a problem, with the system of Okawa, there clearly is no incentive or motivation to modify Okawa with Fukuda to obtain the claim 13 invention.

Appln. No.: 09/918,722
Amendment dated July 12, 2005
Reply to Office Action of May 12, 2005

CONCLUSION

It is believed that no fee is required for this submission. If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

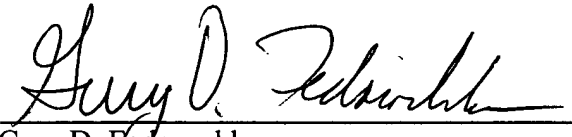
All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,

BANNER & WITCOFF, LTD.

Dated: July 12, 2005

By:



Gary D. Fedorochko
Registration No. 35,509

1001 G Street, N.W.
Washington, D.C. 20001-4597
Tel: (202) 824-3000
Fax: (202) 824-3001

GDF:lab